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Nuclear Modernization and Arms Control in NATO

Arnold Kanter

December 1988

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Nuclear Modernization and Arms Control in NATO

Arnold Kanter

December 1988

**Prepared for
The Ford Foundation**

PREFACE

This Note explores strategic and political issues related to NATO's strategy of flexible response in the wake of the INF Treaty. It analyzes various ways in which the Alliance can satisfy its remaining nuclear requirements within the parameters of the INF Treaty and prospective START limits, while responding to the political concerns of the Federal Republic of Germany (FRG) and other key allies. It also considers the implications of these alternatives for alliance cohesion, continued U.S. leadership of NATO, and the credibility of the current policy of extended deterrence.

The analysis presented here is intended to contribute to the debate about the future role of nuclear weapons in NATO strategy, the desirability of and prospects for negotiating further reductions in nuclear weapons in the theater, and the management of these controversial issues within the Alliance. An earlier version of this Note was presented at a March 21-23, 1988, conference on "Reconstructing NATO Strategy for the 1990s" held in Ebenhausen, FRG. The research was supported in part by a grant from The Ford Foundation.



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SUMMARY

The INF Treaty and its aftermath have not simply returned NATO to a world without ground-launched cruise missiles (GLCMs), Pershing II, and the SS-20, but have crystallized and reinforced long-standing questions about the credibility of NATO's strategy of flexible response, the appropriate role of theater nuclear weapons in the future, and the prospects for continued U.S. leadership of the Alliance. These issues come together in a consideration of whether and how NATO should modernize its remaining nuclear forces.

This Note analyzes different ways in which NATO can respond to the nuclear requirements that flow from its strategy. It considers how INF Treaty constraints and prospective START limits, as well as the special place and concerns of the Federal Republic of Germany (FRG), bear on the various possibilities. It also assesses the implications of different choices for Alliance cohesion, U.S. leadership of NATO, and extended deterrence. On the basis of that analysis, it describes an approach to NATO nuclear modernization and arms control. (JD) (—)

Nuclear weapons perform a variety of political-military functions in support of NATO strategy that simple target coverage calculations do not capture. Key among these is the coupling of the U.S. strategic deterrent to the theater by maintaining an unbroken "powder trail" of nuclear options and risks leading to strategic nuclear exchanges between the Soviet Union and the United States. The elimination of the GLCMs and Pershing II missiles mandated by the INF Treaty is seen by some as leaving a dangerous gap in the "powder trail" that needs to be filled. A closely related issue concerns the future of nuclear artillery and the Lance short-range surface-to-surface missile (SSM), both of which are facing replacement.

NATO has several possible options. It can:

- Revert to dependence on penetrating nuclear-capable aircraft armed with gravity bombs.
- Modernize theater nuclear forces by deployment of air-to-surface missiles (ASMs) and/or sea-launched cruise missiles (SLCMs).
- Compensate with other nuclear forces, including U.S. central strategic forces and U.K. and French nuclear capabilities.
- Compensate with additional conventional forces.

- Modernize or extend the life of short-range missiles and artillery.
- Seek further arms control agreements to reduce nuclear weapons in the theater.

Each of these options has distinct disadvantages as well as obvious virtues. Some relate to considerations such as the survivability, penetrativity, target coverage, and opportunity costs associated with an option. Others relate to the implications of potential START constraints, in the form of both aggregate warhead limits and discrete limits on sea-launched and air-launched cruise missiles.

The more political functions of nuclear weapons in NATO strategy, notably the coupling of the U.S. strategic deterrent to the defense of its allies, impose additional constraints on the choice among alternatives:

- *Nuclear weapons* perform important functions for which conventional weapons of equal military capability and effectiveness cannot substitute.
- Nuclear weapons *based in the theater* perform important functions for which nuclear weapons of equal military capability and effectiveness based elsewhere (either in the United States or at sea) cannot substitute.
- U.S. nuclear weapons perform important functions for which nuclear weapons of other NATO allies (i.e., France and the United Kingdom) having equal military capability and effectiveness cannot substitute.

Taken together, these considerations imply that alternatives that would entail increased reliance on U.S. central strategic systems, on British or French nuclear capabilities, or on enhanced conventional capabilities look distinctly less attractive. Potential START constraints could narrow the list even more, not only by magnifying the disadvantages of U.S. central strategic systems, but also by increasing the costs of using theater-based long-range, nuclear-armed cruise missiles to help meet NATO requirements.

The political context of NATO nuclear modernization further complicates the evaluation. The INF Treaty has had a direct and substantial political impact on NATO nuclear modernization plans in several respects. First, it has increased doubts among Western publics about the need for nuclear modernization. Second, air- and sea-launched options for modernizing longer-range capabilities (i.e., more than 500 kilometers) are vulnerable to accusations that they are a calculated, albeit

entirely legal, circumvention of INF Treaty limits. Third, the expectations raised by the INF Treaty have made the short-range capabilities slated for modernization the obvious next candidates for nuclear arms control negotiations and, very likely, Soviet proposals for another "zero" solution. Fourth, and perhaps most important politically, the INF Treaty has underscored and reinforced the central role occupied by the FRG.

West German support will be literally indispensable to successful implementation of plans for modernization, if only because virtually all short-range systems must be, and many longer-range systems would be, based on FRG territory. The West German leadership, however, is very ambivalent about moving forward on modernization. It is pulled one way by concerns that the FRG has enjoyed few of the benefits of an INF Treaty that imposes no constraints on nuclear weapons within easy reach of targets in West as well as East Germany, and by skepticism about how well modernization of such systems would serve FRG interests. It is pulled the opposite way by its stake in ensuring the coupling of the U.S. strategic deterrent to the security of the FRG, the U.S. political commitment to Europe, and the confidence of its allies in the FRG's unshakable commitment to NATO.

These opposing interests have produced a predictably ambivalent policy. Chancellor Kohl supports nuclear modernization in principle but is clearly reluctant to proceed with implementation of specific modernization programs. There also is a strong consensus in favor of additional nuclear reductions (concentrated on short-range systems), but also some support for modernization, especially of longer-range systems. Finally, there is great interest in new arms control negotiations, but also great hesitation about starting down a road that could result in the "third zero" and another large step toward denuclearization.

It nevertheless may be possible to fashion a three-part approach that both responds to NATO's political-military requirements and respects the fundamental political concerns of the respective allies. One element would be a unilateral NATO program that couples modernization of nuclear artillery with reductions in overall numbers (by as much as 50 percent). A second element would modernize longer-range systems, centered around deployment of a U.S. nuclear ASM on U.S. and allied theater-based aircraft. Implementation of this element would help mitigate the problems for flexible response that many foresee in the wake of the INF Treaty, and would do so in a way that acknowledges German sensitivities about "singularity" and reinforces the principle of "shared risk."

The arms control component is more controversial. The Soviet Union's political and military interests would almost surely be better served than NATO's by new talks aimed at further reducing nuclear weapons in Europe. Given Moscow's incentives, the Soviet temptation to push for the "third zero" in negotiations would prove virtually irresistible. Once offered, the domestic political realities faced by the FRG and other NATO governments could make Alliance acceptance of a "third zero" proposal nearly as irresistible, notwithstanding strong strategic and security arguments to the contrary.

The Alliance's approach to an arms control component depends on judgments both about the political sustainability of NATO's current position against new nuclear reduction talks in the face of popular pressures and likely Soviet initiatives, and about NATO's ability to limit the scope (and potential damage) of such talks if they do take place. It may be possible to avoid new nuclear talks, but probably at the price of postponing modernization of NATO's short-range and, perhaps, remaining longer-range nuclear systems.

The prospects and pressures for new nuclear arms talks are closely related to the questions of whether and when the obsolescing Lance SSMs will be modernized. Although many believe that a commitment is needed soon in order to avoid yet another gap in the spectrum of deterrence, there appear to be no compelling military reasons or production lead time considerations that would force a decision now. At the same time, it is not at all clear that delay would either help build support for a positive decision on Lance modernization in the future or successfully head off pressures for new negotiations in the interim.

If NATO concludes that popular opposition makes modernization of its short-range missiles problematical, it should seriously consider making a virtue of necessity by taking the initiative to propose new talks that would be strictly confined to such missiles. A proposal that led to highly asymmetrical reductions in short-range missiles could have a beneficial impact on the conventional and chemical as well as nuclear threat that NATO faces, even if the Alliance had to accept a "zero-zero" outcome that resulted in the elimination of Lance and its Soviet counterparts.

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I. INTRODUCTION

Construed literally, the terms of the INF Treaty raise no new questions for NATO or for its strategy of flexible response. The terms of the emerging START agreement will not either. But both the INF Treaty and START give renewed emphasis to the question of how NATO can either reverse the erosion of confidence in its strategy of flexible response or find a better and more resilient substitute. Bluntly put, the INF Treaty and its aftermath have not simply returned NATO to a world without ground-launched cruise missiles (GLCMs), Pershing II, and the SS-20, but (abetted by the Reykjavik shocks) have raised the prospect—in a politically relevant, if not compelling way—of eventually eliminating the nuclear weapons in Europe on which the current NATO strategy depends.

Consideration of how to preserve or revise the strategy of flexible response inevitably leads to two other major questions: What is and should be the role of nuclear weapons in NATO strategy? And what is and should be the role of the United States in the Alliance? This Note addresses these issues from the perspective of NATO's nuclear requirements. It considers different ways in which NATO can satisfy those requirements within the constraints of the INF Treaty, how both the terms of the prospective START agreement and the special place and concerns of the Federal Republic of Germany (FRG) could affect the various possibilities, and the implications of different choices for alliance cohesion, U.S. leadership of NATO, and extended deterrence. As befits the topics of extended deterrence and NATO nuclear requirements, this analysis is political-military, but it is more concerned with the strategic consequences and political sustainability of various options than with the details of force structure or target coverage.

Section II surveys the options available to NATO to modernize its capabilities within the constraints of the INF Treaty and briefly describes their respective implications. Section III considers the potential implications of START constraints for these alternatives. Sections IV and V evaluate the strategic and political considerations bearing on the choice among modernization alternatives. Finally, Section VI describes an approach to NATO nuclear modernization that responds to the Alliance's strategic and political requirements while taking account of the distinctive concerns of its allies, particularly the FRG.

II. RESPONSES TO INF TREATY LIMITS

The constraints contained in the INF Treaty are well known by now. Simply put, the Treaty bans all ground-launched cruise and ballistic missiles with ranges of between 500 and 5500 kilometers. Since conventional as well as nuclear-armed missiles are banned, the INF Treaty also limits the Warsaw Pact conventional and chemical tactical ballistic missile (TBM) threats, as well as NATO's potential ability to offset the loss of some of its nuclear capabilities by increasing its own conventional TBM capabilities.

The INF Treaty imposes no limits on tactical or strategic aircraft or their nuclear armament; on sea-launched systems, such as the Poseidon ballistic missile warheads currently assigned to NATO or sea-launched cruise missiles (SLCMs); on ICBMs; on nuclear artillery or ground-launched missiles with ranges of less than 500 kilometers (e.g., Lance); or on third-country nuclear forces. These categories define the range of post-INF modernization options available to NATO. The Pact likewise can continue to strike targets in Europe previously covered by SS-20s by using Soviet SS-21s, SS-25s, and other missiles that fall on either side of the 500- to 5500-kilometer range, as well as cruise missiles deployed on submarines and Backfire bombers.

Whatever its other consequences and effects, the INF Treaty has had little impact on NATO's qualitative requirements for nuclear weapons or for their modernization. The Soviets continue to have overall superiority in conventional and theater nuclear forces in Europe. None of these imbalances is likely to be rectified in the foreseeable future. Neither the current nor the future START-constrained balance of strategic nuclear forces can offset this Soviet superiority in the theater. Consequently, to the extent that NATO continues to rely on the strategy of flexible response, it must depend on a mix of theater nuclear forces that, in combination, cover the Warsaw Pact target base (including targets in the Soviet Union), can survive Soviet preemptive attacks in adequate numbers, and can successfully penetrate and reach their targets. These forces will need to be modernized as they obsolesce and as Soviet capabilities to counter them improve.

In practice, each of the several ways in which NATO can modernize its capabilities has potentially serious disadvantages as well as virtues.¹ The evaluation of the alternatives also can be importantly affected by one's forecast about how START constraints might "spill over" into the theater, one's understanding of the political and military functions of nuclear weapons in NATO, and one's appreciation of the political environment within which any choice would be implemented. Before turning to these other factors, however, we shall sketch the broad choices facing NATO.

REVERT TO DEPENDENCE ON PENETRATING NUCLEAR-CAPABLE AIRCRAFT

In some respects, this alternative would be a return to the *status quo* before the deployment of SS-20s by the Soviets and INF missiles by the United States. Assuming no increase in tactical aircraft inventories, it would once again force NATO to withhold scarce dual-capable aircraft from conventional missions in order to ensure their availability for nuclear strikes, with the arguably perverse consequence of increasing the risks of nuclear escalation by weakening conventional defenses.

Perhaps more important, it would revive the doubts about the credibility of the flexible response strategy that (rather than SS-20s) were the primary stimulus for INF deployments.² To the extent that the post-INF debate addresses technical capabilities, it will be concerned with the ability of theater-based aircraft armed with gravity bombs to survive and penetrate to deliver precise strikes against deep targets (including some in the Soviet Union) with sufficient confidence to deny Moscow any prospect of launching nuclear attacks against Western Europe while insulating Soviet territory from retaliation. On the one hand, NATO confidence in these capabilities will be reduced because Pact air defenses have steadily improved. On the other hand, these improvements are likely to be offset to a greater or lesser degree by the fielding of U.S. and eventually other NATO aircraft incorporating stealth technology. Chances are, however, that if nuclear-capable aircraft were found wanting in the NATO deliberations that led to the 1979 decision to deploy GLCMs and Pershing II, they probably will be in the late 1980s as well.

¹See James A. Thomson, "The LRTNF Decision: Evolution of U.S. Theater Nuclear Policy, 1975-9," *International Affairs*, 60, 4, Fall 1984, pp. 602-612, for a summary of strikingly similar advantages and disadvantages that were seen to be associated with various modernization options during the period leading up to the 1979 "dual-track" decision.

²*Ibid.*, p. 606.

MODERNIZE THEATER NUCLEAR FORCES

Several modernization routes, of course, have been foreclosed by the INF Treaty. The remaining possibilities utilizing theater assets with ranges between 500 and 5500 kilometers would depend on the exploitation of aircraft or sea-based platforms. As noted above, there also is nothing in the INF Treaty that precludes the deployment of ground-launched systems in Europe with ranges of less than 500 kilometers.

Development of an air-to-surface missile (ASM) with sufficient range to stand off from local air defenses would be one way to improve NATO's capabilities to launch deep nuclear strikes. The U.S. SRAM II, with a range of 200 to 400 kilometers, the French ASMP, with a range of about 300 kilometers, and a possible future French-British ASLP with a range of up to 500 kilometers are examples of ASMs that could fill such a role.³ Although ASM-equipped aircraft could cover many important targets in the GDR and western Czechoslovakia while remaining over friendly airspace, they still would have to penetrate and fly through Warsaw Pact defenses to reach deeper targets, and in any event would be unable to duplicate the target coverage currently provided by GLCMs and Pershing II. Overall, however, penetrating aircraft equipped with suitable ASMs would almost surely suffer lower attrition than aircraft equipped only with gravity bombs.

Deployment to the theater of existing long-range (about 2500 kilometers) air-launched cruise missiles (ALCMs) or planned advanced cruise missiles (ACMs) could substantially enhance platform survivability by permitting aircraft to cover virtually all of SACEUR's targets while remaining outside Pact air defenses and launching over NATO territory. As will be discussed below, however, such cruise missile deployments probably would be constrained by START. At least as important, they could well be widely regarded—and resisted—by publics as a circumvention of the INF Treaty.⁴

³There have been reports that the odds against development of a joint French-British ASM are large and growing. See, for example, Duncan Lennox, "Will the UK Decide on SRAM 2?" *Jane's Defence Weekly*, December 10, 1988, p. 1473.

⁴The INF Treaty, of course, imposes no limits whatsoever on ASMs. In addition, the combination of medium-range Soviet bombers and the modern cruise missiles in the Soviet inventory (notably the AS-15, with a range of perhaps 3000 kilometers, and the AS-13, with a range of approximately 800 kilometers) could give Soviet accusations of "circumvention" a hollow ring. Nevertheless, concerns about the appearance of evading INF limits must be counted as one of the obstacles to deploying long-range ASMs to help modernize NATO's nuclear capabilities.

Both ASM alternatives would require scarce NATO aircraft to be withheld from conventional missions, and neither would lessen the dependence of those aircraft on a comparatively small number of vulnerable airbases. Moreover, deployment of any new American weapon systems—including ASMs—is an uncertain prospect in the face of very tight defense budgets, especially if such systems are viewed as fulfilling more of a political than a military requirement, and as being more responsive to allies' needs than to those of the United States. Finally, NATO rejected the option of ASMs in favor of GLCMs and Pershing II in 1979. While the banning of the latter systems obviously changes the calculus, 1979's losing alternative will be 1989's damaged goods.

NATO already relies to some extent on sea-based theater nuclear weapons in the form of the 400 U.S. SLBM warheads assigned to SACEUR and the U.K. sea-based nuclear deterrent. In principle, these sea-based capabilities could be augmented by the deployment of either additional SLBMs or SLCMs to the theater. American SLBM deployments would be constrained by START. And SLCMs may be. Whether cruise missiles or ballistic missiles, sea-based capabilities that are operationally feasible and affordable provide only limited opportunities for the visible Allied participation that is usually considered to be a *sine qua non* of a credible NATO nuclear deterrent. Conversely, sea-based systems that are deliberately designed to enhance opportunities for allied participation (such as the 1960s plans for a Multilateral Force (MLF)) quickly become complex, expensive Rube Goldberg schemes that lack credibility. As in the case of aircraft, using sea-based platforms for nuclear missions also would impose opportunity costs in terms of NATO's conventional capabilities. While, as a practical matter, nuclear SLCMs probably would be deployed with the two carrier battle groups normally deployed in the Mediterranean, the United States would be likely to resist formally *committing* additional forces to SACEUR, especially if these commitments took the form of platforms rather than weapons.⁵ Finally, like ASMs, sea-based systems were considered and rejected in 1979 in favor of the now banned ground-based systems.

The United States already plans to modernize its short-range nuclear artillery and is considering replacement of the Lance surface-to-surface missile (SSM). It is in the process of replacing its current inventory of nuclear rounds for its 203mm

⁵Deploying SLCMs to the Norwegian Sea would be another possibility, but it would raise a host of operational as well as political issues.

artillery with new shells that will have greater range and accuracy as well as better safety features. Plans have also been made to undertake a similar modernization of the 155mm artillery, but their implementation depends, in part, on Congress lifting its ceiling of 925 new nuclear rounds. Finally, the obsolescing Lance missiles may be replaced during the 1990s with a follow-on system that is intended to have improved survivability, greater accuracy, and increased range.⁶

The planned modernization of these short-range systems is widely regarded as necessary to preserve the credibility of the flexible response strategy, but there is nearly as broad a consensus that these battlefield systems cannot by themselves provide the range of options and capabilities currently represented by the INF systems. Equally important, the modernization of such systems—which for the most part would have to be based on FRG territory and could cover only targets in one or the other Germany—raises serious political issues within the Alliance. These are considered below, in Section V.

COMPENSATE WITH OTHER NUCLEAR FORCES

There are two broad “compensation” alternatives: depending more on U.S. central strategic systems, or looking to British and French nuclear capabilities to help meet NATO nuclear requirements.

Depending more on U.S. strategic systems—ICBMs, SLBMs, or strategic bombers based in the United States—could raise various operational concerns related to the suitability of MIRVed or high-yield weapons for NATO targets. Unless the systems were formally assigned to SACEUR, allies would likely question their responsiveness and the dependability of their commitment to NATO rather than to direct U.S. strategic requirements. All such systems, of course, would be constrained by START limits, the implications of which are considered below. Perhaps most important, such a shift could strike at the heart of the concept of “coupling” and could raise even graver doubts about the prospects for controlling escalation should nuclear weapons ever be used.

British and French nuclear capabilities—unconstrained by START or the INF Treaty—will experience significant quantitative and qualitative improvements over the next decade. In pure deterrence terms, they will come to constitute a substantial

⁶See Jesse James, “Tactical Nuclear Modernization—The NATO Decision That Won’t Go Away,” *Arms Control Today*, December 1988, p. 213; and “After the INF Treaty: U.S. Nuclear Buildup in Europe,” *Defense Monitor*, 17, 2, 1988, pp. 6-7.

counterweight in their own right to any Soviet threats. But whatever the military capabilities of these independent nuclear forces and their deterrent value as seen from Moscow, relying on them as substitutes for banned INF systems would be likely to undercut any idea of "coupling" the U.S. strategic deterrent to NATO security and could transform the political nature of the Alliance (to say nothing of requiring a fundamental revision of French and British nuclear policy and strategy). Even when considered in purely theoretical terms, the option of increased reliance on third-country nuclear systems is a non-starter in the current NATO political and strategic context.

COMPENSATE WITH ADDITIONAL CONVENTIONAL FORCES

As noted above, some potential conventional force improvements have been foreclosed by the INF Treaty, and other possibilities may be limited by START. More to the point, the economic, political, and demographic realities facing NATO place sharp limits on the prospects for the Alliance to expand its conventional forces. Finally, regardless of their quantities and capabilities, conventional forces cannot fully substitute for nuclear weapons. More on this below.

SEEK FURTHER ARMS CONTROL AGREEMENTS

In principle, reducing the Pact threat that NATO's nuclear capabilities are meant to counter would be equivalent to modernizing those capabilities. In part, NATO's nuclear deterrent is intended to offset Pact *conventional* superiority. Arms control agreements or unilateral Pact reductions that substantially reduced these large conventional asymmetries could help ease NATO nuclear requirements. But substantially redressing conventional imbalances by means of arms control agreements is a long-term proposition at best. (Implementation of the unilateral reductions announced by Soviet General Secretary Gorbachev on December 7, 1988, would be a step in the right direction, but by itself would not substantially affect the Pact's conventional superiority.) NATO's nuclear capabilities also are designed in part to deter *nuclear* first use by the Pact. Arms control agreements (or unilateral reductions) that reduced or eliminated the Pact's short-range nuclear forces (SNF) could reduce NATO's own nuclear requirements.

In fact, the role of nuclear weapons in NATO is broader and more fundamental than simply offsetting Pact conventional superiority and deterring Pact nuclear strikes. It is concerned as much with *assuring the NATO allies* that the United

States is committed—militarily as well as politically—to their security and their rejection of Soviet intimidation, as with directly *detering the Soviets*. Even if the Pact were to agree to reductions that left both sides with equal conventional capabilities, NATO would still have a strong interest in maintaining and modernizing its nuclear forces. Given NATO's strategy of flexible response and its core option of nuclear first use, Pact proposals to eliminate SNF are particularly mischievous, and NATO's acceptance of them could undermine the Alliance. That judgment depends in large measure on one's assessment of the role of nuclear weapons in NATO strategy, and of the value and functions of U.S. leadership of a cohesive Alliance that includes the FRG as a key, committed member. After examining the potential "spillover" of START constraints into the theater, we will turn to a consideration of these issues.

III. START "SPILLOVER"

Although several issues remain unsettled, most of the quantitative limits of a likely START agreement already are clear. While the direct military implications of these START constraints may appear to be—like INF limits—relatively modest, there could be somewhat more "spillover" onto NATO nuclear requirements than is generally recognized.

START would preserve the current relationship of approximate strategic parity between the two superpowers, albeit at somewhat lower levels (perhaps in the neighborhood of 8000 to 9000 warheads). Because START would impose few limits on modernization (with the possible exception of a successor to the SS-18 "heavy" ICBM), it also would allow both sides to field fully modernized central strategic forces.¹ Finally, START—like INF—would not constrain third-country nuclear forces in any way. In sum, however one evaluates the quantitative and qualitative features of the current strategic balance that bear most directly on extended deterrence, that evaluation will not be substantially affected by START.

That said, START could "spill over" to affect both the nuclear threat the Warsaw Pact poses to NATO and NATO's ability to meet its own nuclear requirements. In principle, START could limit the Soviet nuclear threat to Europe by constraining the number of SS-25s available to substitute for the SS-20s banned by the INF Treaty: The Soviets could cover NATO targets with SS-25s (and other ICBMs) only by allocating fewer to U.S. targets, and *vice versa*. START would impose a similar tradeoff on the United States if we decided to look more to our central strategic systems to help meet NATO's nuclear requirements.

¹The issue of what, if any, constraints on the Strategic Defense Initiative (SDI) will be negotiated in connection with START remains unsettled. Nevertheless, two broad observations can be made. First, technical, political, and budgetary obstacles are likely to preclude any SDI deployments for at least another decade, whatever the outcome of the current arms control negotiations. Second, if the two sides do agree to allow deployments beyond those now permitted by the ABM Treaty, and if the Soviets exploit their near-term ballistic-missile defense (BMD) advantages to do so, then the credibility of the escalatory threats that are at the heart of NATO's strategy of flexible response (as well as hopes for escalation control) could become the first casualties; limited defense deployments that would be overwhelmed by large-scale attacks could still be relatively effective against limited nuclear strikes.

Whether the United States and NATO would in fact face such tradeoffs depends on one's assessment of whether the reduced forces that would be permitted under START are sufficient to meet *both* the needs of extended deterrence and the requirements of deterring a Soviet nuclear attack against the United States. There are, of course, no objective measures for determining either requirement. Instead, the adequacy of the U.S. nuclear deterrent is usually measured in terms of its ability to hold a specified range and number of Soviet targets at risk.

Only about 20 percent of those targets are Soviet strategic forces that would be subject to reduction under START. Perhaps 80 percent of the Soviet target base consists of other military forces and facilities, leadership, and war-supporting industries, none of which would be affected by START limits. This means that START (and successor strategic arms reductions agreements) would reduce U.S. capabilities to hold the Soviet target base at risk much faster than it would shrink that target base.² Even if one believes that current U.S. strategic nuclear forces provide a comfortable margin of deterrence "credibility," START reductions clearly would reduce that margin (although most observers would judge it still to be more than adequate). Allocating some part of START-constrained central strategic forces to help meet NATO nuclear requirements would shrink the margin further. At some point (such as reductions that might be the goal of a "START II" agreement), concerns about such a shrinking margin and its implications for the credibility of the U.S. strategic nuclear deterrent could be transformed into a corrosive debate about tradeoffs between "American" security and "NATO" security.³

The outcome of negotiations about specific START constraints, particularly those concerning cruise missiles, could bring this issue into relief more sharply and

²Since Soviet targeting doctrine is something of an enigma, we cannot say whether the Soviets believe they would face a similar gap between their remaining nuclear capabilities and their targeting "requirements." Even if they do, however, it would not change the fact that the policy of extended deterrence imposes a burden on U.S. central strategic forces for which there is no Soviet counterpart.

³Many of the targets covered by Pershing II missiles and GLCMs probably are also covered by U.S. central strategic systems. If so, the INF Treaty will have only a modest impact on the *de facto* vulnerability of the WP target base. The greater effect of the INF Treaty may be on the allies' *confidence* (and, in turn, Soviet calculations) that SACEUR would be able to execute his nuclear strike plans, and that Soviet nuclear strikes against European targets would dependably lead to retaliation by U.S. nuclear forces. As noted, START-imposed reductions in U.S. strategic forces *might* have a greater impact, although an analysis of that question is beyond the scope of this discussion.

sooner. As noted above, both ALCMs and SLCMs are potential options for helping to meet NATO's nuclear requirements within the parameters of the INF Treaty. But ALCMs will be, and SLCMs could be, subject to limits in START.

Although the two superpower leaders reached agreement in principle at the December 1987 Washington summit to limit long-range, nuclear-armed SLCMs, the two sides remain far apart on how to implement that agreement. Since a NATO nuclear modernization plan probably would call for no more than a relatively small number of SLCMs, virtually any quantitative limit likely to be agreed to by Washington and Moscow (including the ceiling of 400 proposed by the Soviets) probably would accommodate NATO requirements at a tolerable opportunity cost to U.S.-only SLCM requirements.

But the major stumbling block to agreement on the SLCM issue appears to be verification, a problem complicated by the fact that U.S. nuclear-armed and conventionally armed SLCMs share the same airframe and are virtually indistinguishable by visual observation. The current U.S. position is that the verification problems are, as a practical matter, insurmountable and there is no alternative to leaving SLCMs free of quantitative START limits. That position, of course, means that the United States would be able to produce additional SLCMs and assign them to SACEUR. There is reason to doubt, however, that the Soviets would accept a START agreement that simply permitted SLCMs to "run free." Some have suggested that one way to make the verification problem more manageable—and to clear the way for completion of a START agreement—would be to *ban* nuclear-armed SLCMs, while leaving the conventionally armed variants (which many believe to provide a more important military capability) unconstrained.⁴ A ban on nuclear-armed SLCMs, of course, would mean that NATO would have to look elsewhere to meet its nuclear requirements.

Nuclear-armed ASMs are a potential and, most believe, superior alternative to SLCMs for helping to meet NATO's needs. Missiles with enough range to allow aircraft to stand off from Pact air defenses would have obvious advantages. However, START will limit the United States to about 1100 long-range, nuclear-armed ALCMs, a substantially smaller number than the United States might deploy in its strategic force in the absence of START constraints. The question arises as to whether

⁴Whether such an approach would *in fact* make a significant contribution to resolving the SLCM verification problem is highly debatable.

"theater ALCMs" would fall inside or outside these START limits. The answer depends in part on the range limits written into the START Treaty.

The Soviet border is about 1000 kilometers from the inner-German border (IGB). Moscow is about 2000 kilometers from the IGB. Although changes in the target base or routes the missiles fly would permit shorter-range ALCMs, the ability to hold *Soviet* targets at risk with "theater ALCMs" in the same way that GLCMs and Pershing II now do would require that "theater ALCMs" have a range capability of between 1000 and 2000 kilometers. The current U.S. negotiating position would exclude any nuclear-armed ALCMs with ranges of less than 1500 kilometers from START limits. The Soviet position would include any nuclear-armed ALCMs with ranges greater than 600 kilometers in START.

In brief, if the U.S. position prevails, START constraints *per se* would pose negligible obstacles should NATO decide to look to long-range ASMs to help meet its nuclear requirements. If the Soviet position prevails, ALCMs available for NATO requirements would be charged one-for-one against the START-constrained number of ALCMs available to support the U.S. strategic deterrent. Some obvious compromise outcomes (e.g., a 1000-kilometer range limit) would provide only a marginal capability to attack Soviet targets without having to penetrate the IGB and therefore, from the perspective of START "spillover," would be little better than the Soviet position.⁵

One negotiating tack that might be considered would be to exclude ALCMs up to some maximum range capability (e.g., 1500 kilometers) deployed on *theater-based* aircraft from START limits. The rationale would be that the characteristics of the platform rather than the cruise missile's range should be the major determinant of whether the system is subject to "strategic" or "theater" arms control constraints. Such an approach could also have some appeal to the Soviets because it would permit them to deploy ALCM-equipped Backfires outside of START limits. Nevertheless, it would have to be regarded as a long shot at best.⁶

⁵Conversely, if such "theater ALCMs" are not a serious option for NATO modernization or if the United States is unable to prevail in the START negotiations on the range issue, then the United States should consider whether to accept the Soviet proposal for a 600-kilometer range limit in exchange for meaningful Soviet concessions on other issues.

⁶Another kind of START "spillover" could also affect NATO capabilities: The same verification problems that dog SLCMs and led to the decision to ban conventionally armed as well as nuclear-armed INF missiles also haunt ALCM. Although the current U.S. position is strongly opposed to including conventionally

If, as seems likely, "theater ALCMs" were counted against START limits, they would pose the same tradeoffs as other START-constrained forces: satisfying requirements to deter direct attacks on the U.S. homeland versus NATO's extended deterrence requirements. The military, political, and strategic implications of such tradeoffs for NATO depend on whether the issue is explicitly posed and how it is decided. If the United States readily and willingly responded to NATO requirements, notwithstanding the substantial START-dictated curtailment of the ALCM program and the added complications of meeting U.S. deterrence requirements with START-constrained forces, then the principle of "shared risk" would be reaffirmed and Alliance cohesion would be strengthened. If, on the other hand, the United States resisted or refused proposals by its European allies to assign START-constrained "theater ALCMs" to NATO, Alliance cohesion would be strained and U.S. claims to leadership would be challenged. Finally, NATO could simply try to avoid the issue—as well as accusations of INF Treaty circumvention—by looking to alternatives (e.g., 300- to 500-kilometer-range ASMs) that fall outside START constraints to meet its theater nuclear requirements.

armed ALCMs under START constraints, in the end the United States will face a tradeoff between protecting its option to deploy long-range, conventionally armed, standoff weapons at the cost of increased risks of a Soviet nuclear ALCM breakout and sacrificing that option in order to make Soviet cheating more difficult. Depending on which alternative the United States chooses, START could hamper NATO's ability to improve its *conventional* capabilities, as well as its ability to meet its nuclear requirements.

IV. THE ROLE OF NUCLEAR WEAPONS IN NATO STRATEGY

Perhaps the greatest strength of the strategy of flexible response is that it commands support throughout the Alliance. Perhaps its greatest vulnerability is that this NATO consensus depends on a series of officially unacknowledged compromises and artfully drafted ambiguities that are embedded in the formal articulations of the strategy. Nowhere is this clearer than in the role ascribed to nuclear weapons. The search for a clear statement of their role is an exercise in futility because the strategy has to accommodate a range of views among NATO allies extending from the position that the functions of nuclear weapons are primarily political and symbolic to the position that their role is—or ought to be—predominantly military. The authors of a recent report on discriminate deterrence captured this ambiguity nicely:

Sometimes it has seemed as though NATO plans to use battlefield or even theater-wide nuclear weapons for their direct effect in repelling the Soviet invasion. At other times, NATO officials posit a different strategy—that what NATO really intends in threatening to use nuclear weapons is to point up the perils of escalation and, in effect, concentrate the minds of Soviet leaders on the apocalypse at the end of that road.¹

NATO's answer, of course, is that nuclear weapons are intended to perform *both* military and political functions, and that there is no need to agree on the relative emphasis that should be placed on those roles (or, better, that contrasting the political and military functions of nuclear weapons is a false dichotomy).

The *military* functions of nuclear weapons include deterring or breaking up concentrations of conventional forces and deterring first use of nuclear (and perhaps also chemical) weapons by the adversary. This function sometimes is thought to be clearer for shorter-range, "tactical" nuclear weapons than for longer-range, "theater"

¹U.S. Commission on Integrated Long-Term Strategy, *Discriminate Deterrence*, January 1988, p. 27. Ironically, the same report was widely criticized, particularly in Europe, precisely because it chose to reduce the ambiguity by emphasizing one function—the military—over the other. After declaring that "we cannot rely on threats to provoke our own annihilation if carried out" (p. 2), it argued that "the Alliance should threaten to use nuclear weapons not as a link to a wider and more devastating war—although the risk of further escalation would still be there—but mainly as an instrument for denying success to the invading Soviet forces" (p. 30).

(INF) nuclear weapons. The SNF weapons were unaffected by the terms of the INF Treaty and will likewise be unaffected by the constraints of a START agreement. For reasons described below, however, they are likely to bear the brunt of a new round of nuclear force reductions which could occur either as the outcome of new arms control negotiations with the Soviets or as the result of decisions taken unilaterally by NATO.

There also is a military rationale for longer-range weapons, including those that will be eliminated under the terms of the INF Treaty. Indeed, a persistent theme in explaining extended deterrence is that the credibility of the policy depends critically on the military utility of the theater nuclear forces that support it. The military functions of longer-range systems include destruction of second- and third-echelon Warsaw Pact forces, as well as attacks on airbases, logistic systems, and theater command and control.² The introduction of improved target acquisition capabilities into the NATO force structure should increase the feasibility and effectiveness of such longer-range nuclear strikes.

The *political* functions of NATO's nuclear weapons—especially longer-range systems—are, crudely put, to open Pandora's box. When the United States had nuclear superiority, the credibility of extended deterrence rested on the belief that the United States and NATO enjoyed escalation dominance at virtually any level of nuclear conflict. Now the credibility of that policy rests on the willingness of the United States and NATO to embark on a course that runs some *risk* of eventually involving widespread use of strategic nuclear weapons, even though that outcome is one that no one either intended or desired. This threat to, in essence, risk "losing control" is different—and inherently more credible—than a threat to "provoke our own annihilation," as some critics have characterized current NATO strategy, but it also differs in its quality and its credibility from one that derives from escalation dominance.

These differences have two direct consequences. First, the fact that, once begun, the escalation process could eventually lead to the widespread nuclear destruction of the United States leaves an irreducible doubt—especially on the part of our European allies who feel their security to be most directly at stake—about whether the United States would in fact embark on such a course if deterrence failed.

²See Walter B. Slocombe, "Extended Deterrence," *Washington Quarterly*, 7, 4, Fall 1984, p. 98.

That doubt is at the core of those allies' concerns about the depth and durability of the U.S. commitment to NATO. It is a doubt whose amelioration requires continuing attention, but one that never can be finally put to rest.³

Perhaps most important, it is a doubt that substantially defines the political and strategic requirements that NATO's nuclear capabilities must satisfy, and the criteria against which modernization alternatives would be tested. Arguably, U.S. strategic nuclear forces and/or the independent British and French nuclear forces would be sufficient to *deter* Soviet aggression if all that were required was the technical capacity to destroy a vast range and number of targets. Those forces cannot by themselves, however, *assure* the NATO allies or unambiguously persuade the Soviets that the U.S. strategic deterrent is coupled to their security, and that the United States can and will risk nuclear its own nuclear devastation in order to defend them. Paradoxically, more—or at least more specialized—nuclear capabilities may be required to fulfill the assurance than the deterrence function, but unless the NATO allies have that confidence and the Soviets are entirely persuaded, extended deterrence itself would be undermined.

Second, and related, the credibility of the threat to risk "losing control" depends importantly on the absence of any clear stopping points on the nuclear side of the firebreak, i.e., on an unbroken powder trail of nuclear options and risks leading to strategic nuclear exchanges between the Soviet Union and the United States.⁴ Much of the discussion and debate about the need to modernize NATO's nuclear forces and to meet its continuing theater nuclear requirements—notwithstanding INF Treaty constraints—stems from a belief that the failure to do so will open gaps in the powder trail. This is the essential connection between the details of nuclear force modernization and the credibility of the policy of extended deterrence.

It follows that U.S. nuclear weapons in the theater perform several distinctive functions apart from whatever strictly military capabilities they provide and irrespective of how well third-country nuclear forces or improved conventional forces can substitute *militarily* for these capabilities. First, they couple the U.S. strategic

³Ibid., p. 94: "There can be no doubt that extended deterrence now faces a crisis. There cannot, however, be much doubt that extended deterrence has always been in the throes of crisis."

⁴Like most metaphors, both "firebreak" and "powder trail" are imperfect. To some, the former term mistakenly connotes plans to confine any conflict to Europe; to others, the latter term mistakenly confers an automaticity on the escalation process that, if it existed, would undermine NATO's strategy of flexible response.

deterrent to the defense of NATO and form the core of the policy of extended deterrence. Second, they couple the United States politically to Europe by complementing the American conventional presence that underscores the U.S. security commitment to NATO: It can be argued that American troops are in Europe to provide security for the American nuclear weapons stationed there and that the availability of nuclear weapons to defend them deters attack on the American troops.⁵

Finally, U.S. nuclear weapons are the distinctive basis for the U.S. claim to leadership of the Alliance. With the waning of American economic preponderance and the modernization of allied military capabilities, U.S. nuclear weapons are increasingly *the* basis for its leadership role simply because there is no substitute for them. Consequently, if and as the role of nuclear weapons in NATO is diminished, so too will be the role of the United States in the Alliance. It is worth emphasizing, moreover, that far from challenging the United States for the leadership mantle, none of the Allies either wants to assume it or wants any of its European partners to wear it. Even if the United States wished to play a lesser role, there is no obvious candidate on the horizon to fill the void and perform the functions that are indispensable to Alliance cohesion.

This brief survey of the functions of nuclear weapons in NATO strategy and of the distinctive functions of U.S. nuclear weapons leads to three conclusions that are key to evaluating options for meeting NATO's nuclear requirements:

- *Nuclear weapons* perform important functions for which conventional weapons of equal military capability and effectiveness cannot substitute.
- Nuclear weapons *based in the theater* perform important functions for which nuclear weapons of equal military capability and effectiveness based elsewhere (either in the United States or at sea) cannot substitute.

⁵In arguing against further nuclear reductions, Secretary of Defense Carlucci made the converse argument: If U.S. nuclear weapons were withdrawn, he would be hard put to recommend maintaining U.S. forces in Europe at their present level. "If there is a third zero option, then we will weaken the capability of our own forward troops to fulfill their task correctly, and then I and others in responsible positions in the United States will have to decide whether our troops should stay here at all." (Quoted in Robert E. Hunter, "Will the United States Remain a European Power?" *Survival*, 30, 3, May/June 1988, ft. 14.)

- U.S. nuclear weapons perform important functions for which nuclear weapons of other NATO allies (i.e., France and the United Kingdom) having equal military capability and effectiveness cannot substitute.

If these conclusions are accepted, they imply that a realistic list of options for modernizing NATO's nuclear capabilities within INF Treaty limits is somewhat shorter than the one presented above. Specifically, alternatives that would entail increased reliance on U.S. central strategic systems, on British or French nuclear capabilities, or on enhanced conventional capabilities look distinctly less attractive. Potential START constraints could narrow the list even more, not only by magnifying the disadvantages of U.S. central strategic systems, but also by increasing the costs of looking to theater-based long-range, nuclear-armed cruise missiles to help meet NATO requirements. This leaves us with the options of modernization of short-range nuclear SSMs and artillery, increased dependence on nuclear-capable aircraft (armed with gravity weapons, and/or shorter-range ASMs) based in the theater, and an increased stake in additional arms control, with the respective disadvantages associated with each. It also takes us to the political context of NATO theater nuclear modernization, and to the special place and concerns of the FRG in any modernization plans.

V. THE POLITICAL CONTEXT OF NATO NUCLEAR MODERNIZATION

While NATO's plans to modernize its nuclear capabilities predate completion of the INF Treaty, the Treaty has had a direct and substantial impact on them in several respects.¹ First and most broadly, the campaign to build public support for the INF Treaty inevitably insisted that NATO's nuclear deterrent would be as strong or stronger under its terms than it would have been had NATO and Pact nuclear missile deployments proceeded unimpeded by arms control. One result of this argument has been an increase in doubts among European publics about the need for NATO nuclear modernization, including plans to modernize the British and French deterrents. The understandable (but erroneous) argument that NATO's INF deployments were a direct response to the now-banned Soviet SS-20s has compounded these doubts and the attendant confusion about the rationale for post-INF modernization. These reactions have been further reinforced by Gorbachev's ongoing "peace initiative" and the consequent diminution of the perceived Soviet threat to NATO.

Second, the INF Treaty, widely hailed as an "agreement to ban an entire class of weapons," imposes a set of discrete limits that cannot be openly and cynically circumvented in the quest for ways to strengthen—or, some would say, restore—the credibility of NATO's strategy of flexible response. West German Foreign Minister Hans Dietrich Genscher recently observed:

Compensation for disarmament by introducing new arms is out of the question. . . . We would undermine the first disarmament treaty in history if we replaced a missile system with a new one not covered by the agreement. This is out of the question.²

Some might regard cruise missiles (especially ASMs) with ranges of 500 to 5500 kilometers as just such a cynical circumvention. Others might view any nuclear

¹For example, then-SACEUR Bernard Rogers recommended at the 1985 Luxembourg meeting of the NATO Nuclear Planning Group that the 1983 Montebello decision to modernize NATO's nuclear forces be implemented by fielding a follow-on to the Lance SSM and a new tactical ASM, and by modernization of nuclear artillery and nuclear-capable aircraft. (James, op. cit., p. 20.)

²Quoted in *Frankfurter Allgemeine Zeitung*, November 8, 1988.

modernization, including that of systems below the 500-kilometer threshold, as violating the "spirit" of the INF Treaty.³

Third, the INF Treaty focuses increased attention on NATO's plans to modernize its short-range nuclear systems. The political aftermath of the INF Treaty has made the very capabilities slated for modernization the obvious next candidates for nuclear arms control negotiations and, very likely, for Soviet proposals for another "zero" solution. As such, NATO once again may have to reconcile measures designed to strengthen flexible response and ensure the continued viability of extended deterrence with popular yearnings for new arms control agreements to further reduce nuclear weapons.

Fourth, while several allies have key interests at stake, the interests of the FRG are centrally involved in virtually every facet of the NATO nuclear modernization debate. The geographical facts of life dictate that most of the shorter-range nuclear systems in the theater will be deployed on West German territory. The realities of the current basing structure and the range capabilities of theater-based aircraft likewise argue that many of the aircraft earmarked for NATO's longer-range nuclear needs—especially those relying on gravity bombs—also will be based in the FRG. In brief, FRG support will be literally indispensable to successful implementation of NATO's modernization plans for both SNF and INF.

This is the same FRG, however, that has enjoyed few of the benefits of an INF Treaty that imposes no constraints on nuclear weapons within easy reach of German targets (on both sides of the IGB), and will likewise realize few if any direct benefits from a START Treaty. It is an FRG, in brief, that is being asked to bear the lion's share of the political price and strategic risks flowing from nuclear arms control, without having partaken of many of its benefits. It is being asked to do so, moreover, amid widespread perceptions of a reduced Soviet threat,⁴ continuing doubts about U.S. dependability, improved prospects for closer and more open relations between the two Germanies, and public confusion about the need for nuclear modernization in the wake of the INF Treaty.

³In fact, the November 8 Genscher interview quoted above is widely regarded as having been directed specifically against Lance modernization.

⁴The decline in the West German public's perception of the Soviet threat is striking. In 1984, 47 percent of those surveyed saw no serious threat from the East. In 1988, the number had grown to 75 percent. In the same 1988 survey, "defense of the Federal Republic from external threats" ranked last among 17 "social concerns." (Data cited in *Welt am Sonntag*, November 27, 1988.)

It is, in short, an FRG that must be the centerpiece of NATO nuclear modernization but whose support may be in serious question. It inevitably is an FRG that is asking whether additional arms control—not as a complement to, but as a substitute for, modernization—would not serve its interests better. Although they agree about few things (including what to do about the problem), the Left and the Right are united in their unhappiness with the political and security situation in which the FRG finds itself in the aftermath of the INF Treaty. Equally important, the earlier breakdown of the consensus between the Left and the Right about extended deterrence and the role of nuclear weapons in NATO has now been echoed by a breakdown of the consensus *within* the governing coalition about nuclear modernization and arms control.⁵ Indeed, if there is any new consensus emerging among Germany's political leaders and the voters who elect them, it probably is one that reflects a strong preference for continuing deferral, if not ultimate avoidance, of *any* nuclear modernization. Finally, it is an FRG whose chancellor does not want to jeopardize the success of Gorbachev's visit to Bonn this spring or his electoral prospects when he runs again next year, either by allowing nuclear modernization to become a political issue or by being on the wrong side politically if it does.

But Germany, as is often the case, is caught in the middle and is being pulled two ways. Countering its stake in nuclear arms reductions that pay direct and tangible benefits to the FRG are interests that lead it to want to reinforce the linkage of the U.S. strategic nuclear deterrent to its security, reaffirm the commitment of the United States to Europe and to the leadership of NATO, and reassure those concerned about apparent signs of FRG "drift" toward a less Western-oriented, more independent foreign policy.⁶ These latter interests give the FRG a substantial stake in supporting, and being seen to support, nuclear modernization, which continues to bind the U.S. strategically and politically to Europe.

⁵Volker Ruehe, Deputy Chairman of the CDU/CSU parliamentary group, recently observed: "It is no longer possible to ignore the political fact that deterrence is being criticized in the FRG not only by the Left but by the Right, and by people who have traditionally been in favor of the strategy of nuclear deterrence." (Cited in Ronald D. Asmus, "West Germany Faces Nuclear Modernization," *Survival*, 30, 6, November/December 1988, p. 513.)

⁶The FRG is under additional pressure from the United Kingdom and France to support NATO nuclear modernization. Not only do both countries endorse such modernization on the merits, but they also believe that the political sustainability of plans to modernize their own national nuclear forces will be importantly affected by the course of NATO modernization.

These opposing interests—which have created deep fissures within and between the political parties and among their security experts—produce a predictably ambivalent, if not contradictory, FRG posture on NATO nuclear modernization. It is therefore even more hazardous than usual to make sweeping generalizations about the “German” position on this issue. Nevertheless, it is possible to sketch the somewhat kaleidoscopic picture that is emerging.

Chancellor Kohl is on record with renewed support *in principle* for the Montebello decisions but is equally emphatic that there is no need to move forward with the implementing of modernization programs *at this time*.⁷ More generally, there appears to be a strong consensus across the West German political spectrum in favor of additional reductions in nuclear systems, concentrated on those shorter-range systems that must be based on and can cover only targets in one or the other of the two Germanies. At the same time, important parts of the political leadership apparently will support (with varying degrees of enthusiasm) some forms of nuclear modernization, but with a decided preference for longer-range systems, especially those that can reach beyond East Germany to targets in Poland and the western Soviet Union.⁸

Even among those in the FRG who support modernization, many view German acquiescence in any SNF modernization as being contingent on INF modernization that helps recouple the U.S. central deterrent to NATO security and assuages concerns that the Alliance is moving toward a strategy that would confine a nuclear war to Europe (and perhaps to German territory). For similar reasons, those sharing this perspective want any nuclear modernization that does occur to be done in ways that help to “re-spread” the risk and reverse the trend toward German “singularity.” Taken together, these considerations suggest that the prospects for *any* nuclear modernization in the theater may depend on NATO’s ability to forge a new consensus in support of *INF* modernization, and that Germany’s allies must once again shoulder the political burdens that the signing of the INF Treaty only recently lifted.

⁷See, for example, Kohl’s November 17, 1988, address to the North Atlantic Assembly as reported in the *Washington Times*, November 18, 1988.

⁸In a speech delivered while still serving as FRG Defense Minister, Manfred Woerner declared: “The German interest is leaning toward a further reduction of shorter-range systems, above all battlefield weapons, in favor of those weapons that can carry the risk of a potential attacker back to his own territory.” (Quoted in Asmus, p. 504.)

Finally, there appears to be strong interest in achieving at least some of the reductions sought by means of arms control agreements negotiated with the Soviet Union (rather than as a result of unilateral NATO decisions), stemming in part from the expectation that such agreements can contribute to improving East-West relations. Many in the FRG, however, worry about the consequences of any new arms control agreement that results in the "third zero" for the continued credibility of flexible response, and nearly as many predict that the Soviets would make such an irresistible proposal if new nuclear arms control talks were opened. For those who have these concerns, the challenge is somehow to negotiate reductions that stop short of taking another very large step toward the "denuclearization" of Europe.

The Germans, especially those in the governing coalition, clearly face a series of dilemmas. They want further reductions that will produce direct benefits to the FRG, but they do not want to undermine the credibility of flexible response or their allies' confidence in them. They want to achieve these reductions by means of arms control agreements, but they worry about how any new negotiations could be stopped short of a "third zero."⁹ They acknowledge the need for modernization, but they do not want to bear what they regard as a disproportionate share of the political burden, nor do they wish to confront an electorate that is unmistakably opposed to new nuclear weapons.¹⁰

Faced with these dilemmas, the FRG understandably has settled on a strategy of postponement, cloaked in a principled position of making arms control and modernization decisions contingent on the formulation of a comprehensive, integrated strategy and plan—a *Gesamptkonzept*.¹¹ The question facing the Alliance is whether it is possible to construct a package whose elements both reconcile the competing pressures on the FRG and meet NATO's nuclear requirements.

⁹In his November 17, 1988, address to the North Atlantic Assembly, Kohl insisted: "A zero option is out of the question because it would be a decisive step to denuclearizing Europe." (Quoted in the *Washington Times*, November 18, 1988.)

¹⁰Early 1988 polls, for example, showed that 68 percent of the West Germans surveyed were opposed to nuclear modernization. (Cited in Asmus, p. 513.)

¹¹The FRG also insists that the *Gesamptkonzept* be adopted by the other NATO allies. This would both increase the odds against early action on modernization and spread the political risks associated with any decisions that are eventually taken. The Belgians evidently have adopted the same strategy. (See Edward W. Cody, "Belgians Toss NATO a Curve," *Washington Post*, October 28, 1988, p. 26.)

VI. AN APPROACH TO NATO NUCLEAR MODERNIZATION

For the reasons described above, a package that responds to NATO's political-military requirements for modernization would include (1) modernization of shorter-range systems along the line of former SACEUR Rogers' 1985 recommendations, (2) modernization of longer-range capabilities to attack targets currently covered by GLCMs and Pershing II, (3) modernization centered on U.S. systems based in the theater, and (4) modernization that is insulated as much as possible from the effects of START constraints and from any new agreements limiting theater nuclear capabilities.

A package that would respond to specifically German concerns would include (1) reductions in shorter-range systems, especially those capabilities that underscore German "singularity" because they must be based on and can threaten targets only in German territory, (2) arms control proposals to achieve such reductions without going all the way to the "third zero," and (3) modernization of longer-range systems in ways that "re-spread" the risk among the NATO allies, especially among Bonn's allies on the continent.

Constructing either package will be a tall order. Building an integrated package that satisfies both sets of requirements will be a substantial challenge to the Alliance. Nevertheless, what follows is a description of what such an integrated package might look like, offered in full recognition that it falls short of meeting all of the requirements listed above. It draws on suggestions that have recently been offered by both analysts and officials about how to fulfill—in the broadest political-military sense—NATO's nuclear requirements in the aftermath of the INF Treaty.

UNILATERAL REDUCTIONS IN NUCLEAR ARTILLERY

It has virtually become part of the conventional wisdom that NATO can tolerate substantial cuts in its nuclear artillery (perhaps on the order of 50 percent or more), while preserving the essential political—if not necessarily all of the military—functions performed by these systems. Such reductions could help respond to political pressures for more cuts in nuclear arms. To implement these cuts, however, NATO would need to get more "credit" with its publics than previous unilateral reductions (resulting in the removal of more than 2400 warheads since 1979) have

produced. As suggested by SACEUR General John Galvin and others,¹ one way to accomplish this would be an application of the "build down" approach. That is, reductions in nuclear artillery could be explicitly tied to modernization of the remaining force, perhaps in something like a 2-to-1 ratio: two "old" nuclear rounds would be removed *only if* and as one "new" round was deployed. This program of reductions-linked-to-modernization should be undertaken entirely as a unilateral NATO decision in order to insulate it from the potential mischief that arms control negotiations could produce.

MODERNIZATION OF LONGER-RANGE SYSTEMS

Alliance requirements and some German sensitivities (to say nothing of French and British stakes in modernizing their own nuclear forces) all argue for concrete steps to strengthen flexible response in the wake of the INF reductions. It was argued above that *U.S. nuclear weapons based in the theater* perform functions for which other capabilities of equal military effectiveness could not substitute. If this premise is accepted, then the options for modernization are limited to SLCMs and nuclear-capable tactical aircraft. Although some nuclear SLCMs are likely to be deployed routinely in waters around Europe (assuming they are not banned in START), formal commitment of these SLCMs and their platforms to SACEUR would be difficult. In any event, a purely sea-based theater deterrent is unlikely to be regarded as a satisfactory way to politically couple the U.S. strategic nuclear deterrent. If only by the process of elimination, therefore, modernization of NATO's longer-range nuclear capabilities will be based primarily on nuclear-capable aircraft based in the theater, notwithstanding the associated opportunity costs for NATO conventional capabilities.

Such modernization is likely to entail the deployment of an ASM to increase confidence in penetrativity and thereby to reduce the number of aircraft that need to be allocated exclusively to nuclear missions. Ideally, an ASM would have a range (perhaps 1500 kilometers) that would enable it to cover targets into the western Soviet Union without requiring its launching aircraft to penetrate the IGB. Such an ASM, however, might well fall within START limits and also provoke accusations that the spirit (although not the letter) of the INF Treaty had been violated. If NATO

¹See, for example, *Baltimore Sun*, August 11, 1988, p. 2. It should be noted that General Galvin tied such unilateral reductions to specific initiatives in addition to modernization of nuclear artillery, namely, an improved SSM and a new ASM.

feels constrained to yield to the combination of these concerns, then the preferred system would probably be a new ASM with a range of less than 500 kilometers.

Unless it is economically advantageous as well as politically realistic to plan on equipping U.S. aircraft with a European ASM, such a missile (and surely the warhead it carries) should be American, rather than French (the ASMP) or Franco-British (the proposed ASLP). It could be carried on U.S. F-15Es based in the United Kingdom (and perhaps the FRG), and on U.S. F-111E/Fs now based in the United Kingdom or F-111Gs (formerly FB-111s) that may be moved to Britain. To reinforce the Alliance's principle of "shared risk," however, the missile also should be made available for deployment on British, German, and Italian Tornados under "programs of cooperation" at the same time it is deployed on U.S. aircraft (rather than after all the designated U.S. aircraft have been equipped).²

To respond further to German concerns about "singularity," nuclear ASM-equipped F-15Es could be deployed at collocated operating bases in the Netherlands and Belgium as well as in the United Kingdom. If the current U.S. plan to develop a variant of the SRAM II to meet ASM requirements in the theater is implemented,³ the missile also could be carried by F-16s based in several Allied countries, including Belgium and the Netherlands, as well as in Italy and Turkey.⁴ In brief, it is logistically feasible and may be politically necessary to base NATO's modernized longer-range nuclear capabilities in the same countries in which the INF missiles have been deployed.⁵

Although a new nuclear ASM (especially one with a standoff range) undoubtedly would attract political notice, the fact that *aircraft* modernization traditionally has been relatively noncontroversial should facilitate the political management of such modernization plans. If judged necessary or desirable,

²None of these measures should be viewed as challenging the complementary roles played by the British and French nuclear deterrents, or the contribution that European ASMs could make.

³U.S. Department of Defense, *FY 1990 Report of Secretary of Defense Carlucci*, p. 194.

⁴RAND colleague Peter Wilson has offered the intriguing suggestion that AV-8B Harriers might be modified to carry SRAM II. Exploiting the Harrier's V/STOL capabilities would reduce the dependence of ASM-carrying aircraft on a small number of vulnerable airbases. Enhanced survivability for ASMs could be especially important if there is no successor to Lance.

⁵Whether those same countries, notably Belgium and the Netherlands, would be politically willing and able to face a renewed domestic controversy about NATO nuclear modernization is a different—and difficult—matter.

implementation of these programs could be made part of the "build down" approach described above. Like the modernization of nuclear artillery, however, such programs should be insulated from any arms control negotiations over nuclear systems in the theater.⁶

ARMS CONTROL NEGOTIATIONS ABOUT SHORTER-RANGE SYSTEMS

The Soviet Union's interests would almost surely be better served than NATO's by new talks aimed at further reducing nuclear weapons in Europe. Politically, additional cuts could contribute to undermining U.S. leadership of the Alliance and could increase doubts about the dependability of the U.S. security guarantee. Militarily, they would reinforce the advantages that flow from the Pact's conventional and chemical preponderance. The talks themselves would provide multiple opportunities for Moscow to build on its "peace initiative," play on the European publics' urge to reduce the defense burden in response to the "dwindling Soviet threat," and aggravate strains within the Alliance. Given these incentives, the Soviet temptation to push for the "third zero" in negotiations could prove virtually irresistible. Once offered, the domestic political realities faced by major NATO governments could make Alliance acceptance of a "third zero" proposal nearly as irresistible, notwithstanding strong strategic and security arguments to the contrary.

However clear it may be that new nuclear arms control negotiations at this time are not in the Alliance's interest, NATO policymakers still face two related questions of political strategy: First, can pressures for new nuclear talks be successfully resisted, or would NATO's overall interests be better served by yielding to calls from its publics for negotiated reductions? Second, if new negotiations do appear to be the better part of wisdom, can their scope be kept narrow and limited?

⁶There is, of course, some possibility that dual-capable aircraft—if not their nuclear armament—may become part of the prospective negotiations on conventional forces (dubbed CST for "conventional stability talks"). The implications of such a development surely are sufficiently complicated to warrant a separate extended treatment. Suffice it to say here that the virtually certain inclusion of artillery limits in CST already blurs the line between limits on conventional and nuclear (i.e., dual-use) systems. Moreover, if aircraft are included in CST, it might serve to obviate any perceived political need for separate nuclear arms control negotiations that would encompass aircraft and their nuclear armament. Indeed, a cynic might argue from the example of the 15-year-long Mutual Balanced Force Reduction (MBFR) negotiations that putting dual-capable aircraft into CST would be a virtual guarantee against ever having to make them subject to arms control constraints.

A NATO package of unilateral decisions that combined substantial cuts with modernization of the remaining force might be sufficient to meet popular pressures for further reductions in NATO's nuclear forces without opening the Pandora's box of new theater arms control negotiations. Concentrating these cuts on the nuclear artillery deployed in the FRG and coupling them to modernization of theater aircraft (and perhaps SLCMs) in ways that reduce perceptions of German "singularity" likewise might be thought sufficient to respond to distinctive German sensitivities.

There is a growing view, however, that arms control negotiations *per se* must be an essential part of any package that will meet FRG and other allied concerns.⁷ According to this perspective, if it is a truism that there can be no NATO nuclear modernization without the active support and participation of the FRG, then it is nearly as true that there will be no NATO nuclear modernization unless it is accompanied by an arms control complement. A formal NATO position that had the effect of postponing that arms control component until some time in the indefinite future, e.g., until conventional parity between NATO and the Pact has been established, could put NATO nuclear modernization—and therefore current NATO strategy and U.S. leadership of the Alliance—in jeopardy.

A different view holds that pressures for new nuclear reductions talks will depend in large measure on the status of and prospects for other arms control negotiations. According to this perspective, if START seems destined to reach a happy conclusion in the near future and if the conventional stability talks seem to be embarked on a promising course, a NATO package of unilateral modernization and cuts will make pressures for new theater nuclear negotiations relatively easy to manage and resist.⁸ Conversely, if the broader East-West political and arms control climate turns chilly, there could be strong pressures to accede to calls for further *negotiated* reductions in NATO's nuclear capabilities in order to improve relations.

This issue of how NATO responds to calls from Moscow and pressures from Western publics for new nuclear negotiations is likely to be the one around which Alliance debate, strategy, and strains on nuclear modernization revolve. The "right" decision can only be a matter of political judgment, and the outcome cannot be

⁷See, for example, Bernard E. Trainor, "NATO's Tactical Missiles: Updating Set Back," *New York Times*, December 15, 1988, p. 10.

⁸For a proposal to insulate NATO nuclear modernization and reductions from the vagaries of arms control that is consistent with this less pessimistic view, see Robert D. Blackwill, "NATO: Reduce and Modernize at the Same Time," *International Herald Tribune*, March 1, 1988.

confidently foreseen now. It may well be possible to sustain NATO's current position opposing any new nuclear negotiations. On the other hand, concerns that arms control limits on short-range missiles would be an irreversible step down a steep and slippery slope to denuclearization seem overdrawn.

The prospects and pressures for new nuclear talks are closely connected to the question of whether and when the Lance SSM will be modernized. On the one hand, if there are to be arms control negotiations about shorter-range systems, it is virtually inconceivable that short-range *missiles*—including Lance and its possible successors—could be excluded. In these circumstances, the twin questions are whether Lance is a good candidate for arms control and, if so, whether it would be possible to *confine* the talks to SNF missiles and insulate modernization of both artillery and longer-range systems from the negotiations. On the other hand, a decision to press ahead on Lance modernization could substantially increase the pressures on NATO to agree to new nuclear talks. From this perspective, the question is whether to defer any action on Lance modernization in order to avoid new negotiations.

The Lance missiles perform a valuable role in the strategy of flexible response, due in part to their twin virtues of good survivability and high penetrativity, and in part to their capacity to relieve some of the burden on dual-capable aircraft. A follow-on system presumably would be even better on all counts. At the same time, however, the issue of modernizing the system (developing the follow-on-to-Lance, or FOTL)⁹ has achieved a political significance out of all proportion to its military importance. There currently are about 90 Lance launchers, most of which are deployed in the FRG. Even if a modernized system should prove to be politically feasible, and even if that modernized system had a range approaching the 500-kilometer limit imposed by the INF Treaty, the direct military contribution of the system would remain limited. In addition, any imaginable arms control agreement to limit SNF missiles would require vastly asymmetrical reductions by the Pact (a "zero" agreement would result in a ratio of more than 10 to 1) that could have a beneficial impact on the conventional and chemical as well as the nuclear threat.

⁹In principle, options for Lance range from incremental refurbishment of the existing missiles to maintain current levels of safety and effectiveness, to "modernization" of the existing system to enhance its performance in various ways, to wholesale replacement with a new system, i.e., FOTL. Except as noted, literal refurbishment of Lance is not considered in the present discussion, and the terms "Lance modernization" and "FOTL" are used interchangeably.

FOTL, however, is rapidly becoming the next political litmus test of NATO's ability to modernize its nuclear capabilities in the face of a Soviet political campaign to stop it. The difference is that first the INF deployments and then the INF Treaty have taken their toll on Allied political leaderships. The Gorbachev announcement of unilateral cuts in Soviet conventional forces has added a further obstacle.¹⁰ Nowhere is this more true than in the FRG, where any land-based successor to Lance would have to be deployed, but which could be put under great pressure by those allies who have invested the modernization decision with great political significance (and who would not have to pay the domestic political price of implementing it).

In brief, some political pessimists would argue that if NATO is put to the test over FOTL, not only would Alliance cohesion be put under even greater strain than that imposed by the INF deployment and Treaty, but it simply might not pass at anything like an acceptable cost: The modernization of short-range nuclear missiles may be a problematical proposition in NATO, *whether or not* nuclear missiles are put on the table in arms control negotiations. If the FOTL issue also can be exploited to help relieve arms control pressures, according to this view, it might well be counted as making a virtue of necessity, even if an offer to negotiate about Lance and its follow-on may be tantamount to offering to ban short-range missiles on both sides.

There are, however, two contrary—and somewhat contradictory—views. One is that pressures for arms control talks are readily resisted, and the other is that such pressures must be resisted at all costs. The first holds that the same favorable climate that would make it possible to resist pressures for new nuclear talks also would permit FOTL to go forward at an acceptable political cost, even in the FRG.¹¹ The second view holds that pressures for new nuclear talks must be resisted at all costs because they could not be confined to short-range missiles but sooner or later would encompass all of NATO's remaining nuclear capabilities. According to this

¹⁰Although the NATO Secretary General has insisted that there is no connection between the unilateral Soviet troop cuts and the need to update NATO's nuclear capabilities, the prevailing opinion seems to be that, as a political fact of life, the Gorbachev initiative has further complicated prospects for modernization. (See Robert Pear, "NATO Praises Soviet Cuts But Doesn't Offer 'Any of Its Own,'" *New York Times*, December 10, 1988; and Steve Holand, "Ploy Threatens Missile Upgrade," *Washington Times*, December 12, 1988.)

¹¹The opposite prediction, however, is at least as plausible. That is, progress on conventional arms control could erode political support for nuclear modernization and could fuel concerns that such modernization would torpedo prospects for an agreement on reductions. Critical comments about FOTL following the Gorbachev announcement may be a preview of this process.

school, far from relieving arms control pressures, putting Lance on the negotiating table would quickly result in NATO defending itself against denuclearization proposals across a broad front.

The pressures to make a decision on FOTL stem from several sources. In part, they grow out of a concern that Lance will reach the end of its useful life by the early to mid-1990s. That prospect, in turn, feeds anxieties about the creation of yet another gap in the NATO nuclear powder trail.¹² In part, they also reflect the fact that the U.S. Army not only prefers a more modern system that promises improved capabilities and lower manpower requirements, but also is very reluctant to spend increasingly scarce defense budget dollars on expensive refurbishment simply to keep an obsolete missile in the field. The Army also may calculate that the same increasing budget scarcity will make it more and more difficult to win approval for a new missile (or any new system): For budgetary reasons alone, postponing a decision on FOTL may be tantamount to a decision not to deploy a follow-on system.

In fact, however, a decision on FOTL—and the political controversy that would be likely to accompany it—probably can be deferred for a time without excessively delaying the fielding of the new system. Deployment of a conventional version of the leading candidate for FOTL, the Army Tactical Missile System (ATACMS), is already planned for the early 1990s, a study to make ATACMS dual-capable has been authorized by Congress, and the launcher for ATACMS—the Multiple Launch Rocket System (MLRS)—is already in the force.¹³ Moreover, the life of the existing Lance almost certainly can be extended several years, albeit at some nontrivial cost.

But if there is no compelling reason to make a decision on FOTL now, it also should be noted that deferral would not be cost-free. First, the absence of negotiations about reductions in short-range missiles would expose other nuclear modernization programs, notably ASMs, to increased political criticism. Second, deciding to defer a decision on FOTL in the hope of avoiding arms control talks would simply pass the initiative to Gorbachev to press for such negotiations when they

¹²French Foreign Minister Roland Dumas recently stated: "If NATO does not begin modernizing its nuclear forces by 1989, there will be a gap in the alliance's nuclear capability by 1992." (Quoted in *Le Figaro*, December 6, 1988.)

¹³Whether it is desirable to field a nuclear version of ATACMS is a separate question which is beyond the scope of the present discussion. Suffice it to say that, given the problems of reliably distinguishing between conventional and nuclear variants of a given weapons system—highlighted by the START debate about SLCM limits—verification of some future arms control constraints on short-range nuclear missiles could jeopardize the conventional capabilities provided by ATACMS.

would provide the Soviets with the greatest political benefit. Third, and perhaps most important, it is difficult to see why—barring developments such as a Soviet-inspired breakdown of the conventional arms talks or a hardline successor to Gorbachev—a decision to proceed on FOTL will become politically easier in the next few years.

The key choice facing NATO, then, is whether to postpone a FOTL decision in the hope of avoiding the costs and risks posed by new nuclear arms control talks, or to proceed on the assumption that a follow-on nuclear missile is not in the cards in any event, extracting as much benefit as possible from that situation by proposing such talks itself in the near future. Limits on (or, more likely, the elimination of) short-range SSMs undoubtedly would pose real costs and risks to NATO. Nevertheless, the prospective military benefits resulting from highly asymmetrical reductions in the Pact nuclear, conventional, and chemical threats posed by Soviet tactical ballistic missiles, the prospective political benefits of a NATO initiative on nuclear arms control, and the problematical prospects for Lance modernization with or without arms control make a proposal for new talks to limit short-range missiles worthy of serious consideration within the Alliance.

In any event, a *de facto* NATO decision to avoid making the choice could result in the worst of both worlds, i.e., the abandonment of NATO's short-range nuclear missile capability without compensation in the form of the negotiated elimination of Soviet short-range missiles. The military contribution of these systems and the political importance of the issue—not least to those in the German political leadership and elsewhere who have gone out on a limb to support the FOTL decision—should preclude such a course.

POLITICAL MANAGEMENT

There is never a good time to make hard decisions, but the current combination of obstacles looks unusually bad. There will be inevitable delays while the new U.S. administration sorts itself out and defines its positions and policies on nuclear modernization and arms control in NATO. The Germans face their own election toward the end of 1990. A Gorbachev visit to Bonn this spring and a series of German provincial elections will punctuate the intervening months. But if there is no "good" time during the next twelve to eighteen months to engage these questions, the Soviets—not to mention any of several possible developments in the West—could well deny NATO the luxury of simply drifting.

What NATO can begin to do now is build an intra-Alliance consensus about the *elements* of a program that combines reductions, modernization, and arms control, and about the *relationship* among them. Suggestions about both have been offered above. The United States has a leadership role to play, but that role is even more delicate than traditionally has been the case. On the one hand, taking the initiative to formulate an integrated package can help the FRG avoid paralysis and stalemate by pointing the way out of the dilemmas the Germans face. On the other hand, the United States needs to apply a light touch and, in particular, avoid actions that make firm decisions about Lance modernization seem to be either urgent or the turning point for the Alliance.

Finally, the United States needs to provide reassurance about its continued commitment to extended deterrence and flexible response. This is partly a matter of the new administration addressing doubts stimulated by the debate surrounding SDI, Reykjavik, and the recent presidential campaign simply by stating that it continues to support the policy of extended deterrence and the strategy of flexible response. It is partly a matter of taking tangible steps that reinforce such statements, including making and implementing decisions on the outstanding issues of *strategic* force modernization (notably those concerning ICBMs), managing the end game in START in ways that take account of the NATO dimension, and demonstrating a willingness to develop and deploy the systems that would implement an agreed NATO nuclear modernization program despite growing pressures on the defense budget. Last, and perhaps most difficult, it means controlling the urge to threaten the Europeans with troop withdrawals and other sanctions if they do not assume a larger share of the common defense burden.

The FRG's role obviously is critical. The FRG must be persuaded not to pursue a strategy that amounts to indefinite postponement of hard decisions, and to join actively in shaping an integrated package of modernization, reductions, and arms control decisions that could be ready for NATO approval by, say, the spring or fall 1989 NATO Ministerials. In exchange, the FRG should be granted the predominant voice about how best to coordinate the announcement and implementation of the package with other events, notably its own political calendar.

The other Allies cannot stand on the sidelines. At a minimum, they must join in the consensus about the need for continued nuclear modernization as well as the specifics of the package that emerges. The other four INF basing countries (and perhaps other Allies) may well find themselves being asked to play a direct role

alongside the FRG in implementing a program to modernize longer-range systems, either by equipping their aircraft with a new U.S. nuclear ASM or by allowing U.S. ASM-equipped aircraft to be deployed on their territory. Finally, the French and the British will find themselves walking a fine line between restraining American urges to move more quickly than the FRG can accommodate, and applying excessive pressures on the Germans themselves out of concern about their own plans for nuclear modernization.

It will not be easy to fashion a program that addresses the multitude of diverse and often conflicting concerns swirling around NATO nuclear modernization, gets each of the Allies to do its part in the strategy that results, and then manages the political pressures that ensue. There are, however, reasons for optimism. The air of crisis in some quarters immediately after the INF Treaty was signed has substantially abated, NATO has directed a new study of its nuclear weapons requirements that provides a good vehicle for fashioning an integrated program and implementing a strategy, and the FRG's allies are demonstrating a reassuring awareness of the web of dilemmas it faces.

The communique issued at the conclusion of the October 1988 meeting of the Nuclear Planning Group reflects an emerging Alliance consensus.¹⁴ It reaffirmed that "for the foreseeable future NATO requires diversified, survivable, and operationally flexible nuclear forces in Europe across the entire spectrum of ranges." It also recorded its commitment to modernization in principle by noting that "our deterrent forces, conventional and nuclear, . . . will be kept up-to-date as necessary." Finally, it acknowledged FRG concerns by observing that "no decisions are required now on the implementation of specific measures" but left the clear implication that the issue will have to be faced eventually, in its characterization of "our step-by-step approach, under which decisions will be taken when necessary . . . [to] ensure that NATO's nuclear forces continue to provide a credible and effective contribution to the Alliance's strategy of deterrence."

There are no guarantees that NATO will successfully avoid the "crisis," face the "watershed," or endure the "agonizing reappraisal" that so frequently seems to loom before it, and there surely are no grounds for complacent assumptions that the Alliance once again will muddle through. In particular, it remains to be seen

¹⁴NATO Press Service, "NATO Nuclear Planning Group: Final Communique," Press Release M-NPG-2(88)63, October 28, 1988.

whether NATO will be able to face and make hard decisions on nuclear modernization and arms control in a timely way, or will instead lapse into a *de facto* policy of indefinite delay that leaves issues unresolved, intra-Alliance tensions unattended, and NATO defensively reacting to self-interested initiatives from the East and popular discontent at home. This Note has argued, however, that it is possible to paint a plausible picture of how NATO can adapt its current policy and strategy to the new circumstances in ways that both maintain security and stability in Europe and allow NATO to exercise political leadership in the international community.